

Abstract

Radiolabeled ligands useful as probes for determining the relative abundance, receptor occupancy, and/or function of nicotinic acetylcholine receptors. The compounds of Formula I as described herein are labeled with a radioactive isotopic moiety such as ^{11}C , ^{18}F , ^{76}Br , ^{123}I or ^{125}I . Disorders are diagnosed by administering to a mammal a detectably labeled compound and detecting the binding of that compound to the nAChR. The compounds that have been administered are detected using methods including, but not limited to, position emission topography and single-photon emission computed tomography. The present invention is useful in diagnosing a wide variety of diseases and disorders as discussed herein.